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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,033	TONKOVICH ET AL.	
	Examiner	Art Unit	
	PAUL A. WARTALOWICZ	1735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31,33-55 and 57-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *73,74 and 80* is/are allowed.

6)☒ Claim(s) *1-31,33-55,57-72 and 75-79* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/21/10,6/21/10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/5/10 have been fully considered but they are not persuasive.

Applicant argues that the citation of Tonkovich '408 and Tonkovich '647 in the above rejections is improper due to the fact that each reference is prior art under 102(e) and that Tonkovich '408, Tonkovich '647, and the present invention are commonly owned.

However, a statement that the reference available under 35 USC 102(e) and the present invention are commonly owned is not sufficient to overcome a rejection under 35 USC 103(a). The burden of establishing that subject matter is disqualified as prior art is placed on applicant once the examiner has established a prima facie case of obviousness based on the subject matter. For example, the fact that the reference and the application have the same assignee is not, by itself, sufficient evidence to disqualify the prior art under 35 U.S.C. 103(c). There must be a statement that the common ownership was "at the time the invention was made." MPEP 706.02 (l)(2)(I).

Applicant argues that the rejections of claims 52 and 53, the rejection of claims 60, 61, and 76, the rejection of claims 30, 65-68, and 77, respectively, do not provide any rationale as to why the references were combined.

However, the rejection of claims 52 and 53 is proper because Reyes teaches a well known support for catalysts as described in the rejection below. The claims do not

specify what reaction takes place in the microchannel, therefore it appears that the motivation of providing a well known catalyst support material in the oxidation process art is sufficient to render the claims nonobvious.

The rejection of claims 60, 61, and 76 is proper because Ghosh teaches contact time necessary to complete a reaction in a microchannel as discussed in the rejection below.

The rejection of claims 30, 65-68, and 77 is proper as both TeGrotenhuis and Tonkovich '647 are drawn to carrying out reactions in microchannel apparatus. One of ordinary skill in the art would have been motivated to combine the two references as there disclosures pertain to a substantially similar art field.

Applicant argues that TeGrotenhuis does not suggest the use of two or more separate reaction zones in the reaction flow path 51 and that in contrast the applicants ' independent claims specify a "first reaction zone" and "another reaction zone" in the same process microchannel.

However, the combination of TeGrotenhuis and Tonkovich '408 meet this combination. As relied upon in the rejection below, Tonkovich '408 teaches a method wherein different reaction zones are separated by non-reactive zones where heating or cooling occur in the absence of a showing to the contrary. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of

references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that TeGrotenhuis does not teach that the heat exchange fluid undergoes a phase change in the heat exchange channels.

However, TeGrotenhuis is not relied upon to teach the limitation of the heat exchange fluid undergoes a phase change in the heat exchange channels. Brophy is relied upon to teach that the heat exchange liquid undergoes a phase change as described in the rejection, below. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that TeGrotenhuis does not teach or suggest a first set of heat exchange channels separate from a second set of heat exchange channels, wherein the first set of heat exchange channels heats a first reaction zone and the second set of heat exchange channels heating a another reaction zone.

However, it appears that the use of a separate heat exchange channels to provide heat to another reaction zone is a mere duplication of parts in the absence of unexpected results. MPEP 2144.04 (VI) (B).

Applicant argues that the process disclosed on page 13 is a WGS reaction and not a partial oxidation reaction and that the process disclosed on page 31 where a 300°C temperature is referred to is a WGS reaction.

However, TeGrotenhuis teaches that partial oxidation and WGS are some of the reactions that take place in the microchannel reactors and that the reactions, particularly the WGS can take place at temperatures such that the microchannel reactor is at a temperature of 300°C (page 31). TeGrotenhuis teaches that the WGS reaction takes place at 90% conversion (page 13). Additionally, TeGrotenhuis teaches that the process can be applied to different reactions such as oxidation (page 27). Therefore, one of ordinary skill in the art would have recognized that the process for converting 90% of an initial reactant would be equally applicable to the oxidation reaction in the absence of a showing to the contrary.

Applicant argues that "90% of conversion is reached" taught by TeGrotenhuis is not the same as approach to equilibrium and that "approach to equilibrium" is defined as being the actual conversion of a reactant divided by the equilibrium conversion for that reactant.

However, it appears that 90% of conversion of a reactant would overlap with an approach to equilibrium in the absence of a showing to the contrary as 90% conversion of a reactant would be greater than or equal to 90% of an approach to equilibrium. It is unclear how a value of an approach to equilibrium can be greater than the absolute conversion of a reactant.

Applicant argues that the TeGrotenhuis does not teach sequential reactors, having ribs formed of catalyst (fig. 10, #164).

However, the rejection does not rely on the recitation of fig. 10, #164 teaching sequential reactors. See Office Action mailed 5/12/10 at page 3. This recitation is relied upon to teach plural fins coated with catalysts in the microchannels.

Applicant argues that Brophy does not provide a disclosure to make up for the deficiencies in TeGrotenhuis that would be sufficient to render independent claims 1, 69, 78, and 79.

However, Brophy is not relied upon to teach determining the equilibrium conversion value for a reactant and conducting the reactant in a microchannel wherein a first reaction is conducted in the first reaction zone of a microchannel at a first reaction temperature and then another reaction is conducted in another reaction zone in the microchannel at another temperature. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that the alumina support taught by Reyes is too large for the microchannel of TeGrotenhuis.

However, Reyes is relied upon to teach that alumina material is a known support for catalysts in oxidation reactions (col. 3, lines 15-25; col. 5, lines 60-65). One of ordinary skill would recognize that the alumina support of Reyes could be scaled down to accommodate a smaller reaction space in the absence of unexpected results.

Applicant argues that the teaching in Ghosh of near complete mixing of two liquids in one second corresponds to channel widths of 100 microns has nothing to do with a contact time for a chemical reaction.

However, Ghosh teaches that a contact time for having complete mixing of two liquids (reactants) for a microchannel having a size of 100 microns would be 1 second (col. 1, line 65-col. 2, line 5). Because both WGS and oxidation reactions require the mixing of two reactants to produce a reaction product, one of ordinary skill would recognize that the time for complete mixing in a reactor having a size of 100 microns would be 1 second. During this time, the reactants would be mixing and contacting the catalyst in the absence of a showing to the contrary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-29, 31, 33-51, 54, 55, 57-59, 62-64, 69-72, 75, 78, 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeGrotenhuis et al. (WO 03/078052) in view of Tonkovich (US 7470408 which claims priority to provisional application 60/531,006, which is referred to herein) and Brophy (US 7118920).

TeGrotenhuis teach a process for oxidation (page 27) wherein the reactions are equilibrated to 90% conversion (page 13) and plural fins coated with catalysts (fig. 10, #164), are used in the process (page 26) wherein the multiple microchannels have temperatures around 300°C (page 31). TeGrotenhuis additionally teach or suggest limitations including: another reaction temperature in a second step is lower than the reaction temperature in a first step (page 13), the dimensions of the microchannel (page 9), counter-current relationship of fluid of microchannel with heat-exchange channel (page 15).

TeGrotenhuis fail to teach that an intermediate is formed in a first reaction zone with a first catalyst and a final product is formed in a second reaction zone and that the

reaction zones are separated by a non-reactive zone, the first reaction zone and another reaction zone being in the same process microchannel.

Regarding claims 1, 15, 16,Tonkovich, however, teaches *in situ* mixing in microchannels (page 1) wherein different catalysts can be disposed along a microchannel (that form different reaction stages) with non-reactive zones between the different reaction zones for the purpose of providing a reaction channel that can produce a product in a two-step process via an intermediate product (page 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide different catalysts disposed along a microchannel (that form different reaction stages) with non-reactive zones between the different reaction zones in TeGrotenhuis in order to provide a reaction channel that can produce a product in a two-step process via an intermediate product (page 5) as taught by Tonkovich.

Regarding claims 1, 3, 13, 14; in the alternative, Tonkovich teaches *in situ* mixing in microchannels (page 1) similar catalysts can be disposed along a microchannel (that form different reaction stages) with non-reactive zones between the different reaction zones for the purpose of reducing the amount of side reactions (page 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide similar catalysts disposed along a microchannel (that form different reaction stages) with non-reactive zones between the different reaction zones in TeGrotenhuis in order to provide a reaction channel that has a reduced amount of side reactions (page 5) as taught by Tonkovich.

TeGrotenhuis fails to teach that the heat exchanger comprises the heat exchange fluid undergoing a phase change in the heat exchange channels.

Brophy, however, teaches a carrying out reactions in microchannels (col. 1, lines 5-10) wherein it is preferable for the heat exchange fluids to have a phase change in the heat exchanger (col. 12, lines 50-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the heat exchange fluids to have a phase change in the heat exchanger (col. 12, lines 50-62) in TeGrotenhuis in order to carry out chemical reactions in microchannels as taught by Brophy.

Regarding claim 2, 4, Tonkovich teaches that the number of catalysts can be extended to any desirable degree (page 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide an additional catalyst in TeGrotenhuis because Tonkovich teaches that the number of catalysts can be determined readily through routine experimentation (page 5).

Regarding claims 5,6, 8,12, TeGrotenhuis teaches that the heat-exchange channel is counter-current (page 15).

Regarding claim 11, TeGrotenhuis teaches that the heat-exchange channel is co-current (page 15).

Regarding claim 19, TeGrotenhuis teaches materials for the microchannel (page 21).

Regarding claim 20, 23, TeGrotenhuis teaches counter-current relationship of the fluid of microchannel with heat-exchange channel (page 15).

Regarding claim 24, TeGrotenhuis teaches a co-current relationship of the fluid of microchannel with heat-exchange channel (page 15).

Regarding claims 44-47, TeGrotenhuis teaches that the fins are coated with support foam that supports the catalyst coating (page 24).

Regarding claims 27 and 29, one of ordinary skill in the art would recognize that normal error rates in production of the microchannels and heat exchange channels would result in a slight variance of length the channels such that heat exchange channels would have a length that is different than the length the process microchannels.

Regarding claims 48 and 49, one of ordinary skill in the art would recognize that normal error rates in production of the fins would result in a slight variance of length and height of the fins such that at least one of the fins would have a length and/or height that is different than the length and/or height of the other fins.

Additionally, for claims 27,29,48,49, the claims recite certain dimensions being shorter than other dimensions. It appears that any variance would constitute a difference in dimension, i.e. the range would be anything less than exactly the same dimension. Because a dimension being slightly shorter than another dimension would be encompassed in this range, the prior art range is so close that one skilled in the art would have expected it to have the same properties. *Titanium Metals Corp. v. Banner,* 227 USPQ 773.

Regarding claim 55, TeGrotenhuis teaches that a method carried out is methanol synthesis. Additionally, it appears that carrying out this process would necessarily require an equilibrium approach substantially overlapping that of the claimed invention (more than 5%). In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.05 (I).

Additionally, it appears that Tonkovich is silent with respect to whether there is catalyst in the heat exchanger chamber (fig. 2d, 220). However, catalyst is sometimes added to exothermic chamber (100). One of ordinary skill in the art at the time applicant's invention was made would recognize that there is no catalyst present in the heat exchanger zone of Tonkovich because a catalyst coating is only mentioned regarding the exothermic chamber.

Additionally, it would have been obvious to incorporate these singular elements into an integral reactor. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (A claim to a fluid transporting vehicle was rejected as obvious over a prior art reference which differed from the prior art in claiming a brake drum integral with a clamping means, whereas the brake disc and clamp of the prior art comprise several parts rigidly secured together as a single unit. MPEP 2144.05.

It appears that a 100% approach to equilibrium would be about 50% conversion as an approach to equilibrium would equate to roughly half of the reactants being consumed. As TeGrotenhuis teaches that the processes have generally a 90% conversion rate, it appears that this would be equivalent to an approach to equilibrium of close to 100% and therefore overlaps with the range in the claims. In the case where

the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.05 (I).

Regarding claim 75, Tonkovich teaches that the flow through the microchannels is in excess of 50 m/s (page 3) and that the volume of the microchannels is 2 milliliters.

It appears that the range of 50 m/s overlaps with a product rate of at least 1 SLPM. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.05 (I).

Regarding the limitation in claim 78 of a first heat exchange fluid in first heat exchange channels and another heat exchange fluid flowing in another set of heat exchange channels wherein the first heat exchange fluid is the same as the another heat exchange fluid, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. MPEP 2144.04 (VI) (B).

Claims 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeGrotenhuis et al. (WO 03/078052) in view of Tonkovich (US 7470408 which claims priority to provisional application 60/531,006, which is referred to herein) and Brophy (US 7118920) and Reyes (US 6726850).

TeGrotenhuis teaches the process as described above in claim 1.

TeGrotenhuis fails to teach the material of the support for the catalyst.

Regarding claims 52 and 53, Reyes teaches that alumina is a well known support for catalysts (col. 5).

Therefore, it would have been obvious to make the ribs of TeGrotenhuis out of alumina in order to provide a well known support for catalysts as taught by Reyes

Claims 60, 61, 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeGrotenhuis et al. (WO 03/078052) in view of Tonkovich (US 7470408 which claims priority to provisional application 60/531,006, which is referred to herein) and Brophy (US 7118920) and Ghosh (US 5961932).

TeGrotenhuis teaches a process as described above in claim 1.

TeGrotenhuis fails to teach the claimed contact time.

Ghosh teaches a method of carrying out chemical reactions in microreactors (col. 1, lines 14-31) wherein contact time in a microchannel for two reactants is 1 second for the purpose of allowing near complete mixing of the reactants (col. 1, line 65-col. 2, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the contact time in the microchannel for two reactants is 1 second in TeGrotenhuis in order to allow for near complete mixing of the reactants (col. 1, line 65-col. 2, line 5) as taught by Ghosh.

Regarding claims 60 and 61, one of ordinary skill would recognize that the contact time would be smaller for smaller channels. Therefore, smaller channels such as those taught by TeGrotenhuis (less than 0.5 mm, page 9) will result in contact times smaller than 1 second such that the range of contact times contemplated by the prior art overlaps with those of claims 60 and 61. In the case where the claimed ranges "overlap

or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.05 (I).

Claims 30, 65-68 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeGrotenhuis et al. (WO 03/078052) in view of Tonkovich (US 7470408 which claims priority to provisional application 60/531,006, which is referred to herein) and Brophy (US 7118920) and Tonkovich (US 7029647).

TeGrotenhuis teaches a method as described above in claim 1.

TeGrotenhuis fails to teach the claimed pressure in the heat exchange fluid.

Tonkovich '647, however, teaches a method for carrying out chemical reactions in microchannels (col. 1) wherein the pressure in the microchannels is from 1-3 atm (col. 18, lines 54-60) and the pressure drop is up to 10 atm/m (col. 19, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide pressure in the microchannels is from 1-3 atm (col. 18, lines 54-60) and the pressure drop is up to 10 atm/m (col. 19, lines 15-25) in TeGrotenhuis in order to carry out chemical reactions in microreactors as taught by Tonkovich '647.

Regarding claim 77, Tonkovich teaches that the flow through the microchannels is in excess of 50 m/s (page 3) and that the volume of the microchannels is 2 milliliters.

It appears that the range of 50 m/s overlaps with a product rate of at least 1 SLPM. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.05 (I).

Regarding claim 68, Tonkovich '647 also teaches that unreacted starting materials are recycled back to the inlet (col. 4, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide unreacted starting materials are recycled back to the inlet (col. 4, lines 20-35) in TeGrotenhuis in order to carry out chemical reactions in microreactors as taught by Tonkovich '647.

Regarding claim 30, Tonkovich '647 also teaches that the heat exchange channel is made of copper, inter alia (see claim 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the heat exchange channel is made of copper, inter alia (see claim 11) in TeGrotenhuis in order to carry out chemical reactions in microreactors as taught by Tonkovich '647.

Allowable Subject Matter

Claims 73, 74, 80 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or suggest a process for generating either methanol (claim 73) or dimethyl ether (claims 74 and 80) in a microreactor wherein the product is formed in a, at least, two step process with the claimed equilibrium conversions in combination with the other limitations of claim 73 and claims 74 and 80, respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL A. WARTALOWICZ whose telephone number is (571)272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul Wartalowicz/
January 11, 2011

/Jessica L. Ward/
Supervisory Patent Examiner, Art Unit 1735